

REC'D 13 OCT 2004

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Applicant's or agent's file reference L8000684WO	<b>FOR FURTHER ACTION</b> See Notification of Transmittal of International Preliminary Examination Report (Form PCT/IPEA416)	
International application No. PCT/CA 03/01195	International filing date (day/month/year) 07.08.2003	Priority date (day/month/year) 09.08.2002
International Patent Classification (IPC) or both national classification and IPC G02B6/38		
Applicant LE SAVOIR DU GARDIEN INC. et al.		

1. This international preliminary examination report has been prepared by this International Preliminary Examining Authority and is transmitted to the applicant according to Article 36.
2. This REPORT consists of a total of 5 sheets, including this cover sheet.
- ☒ This report is also accompanied by ANNEXES, i.e. sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT).

These annexes consist of a total of 17 sheets.

3. This report contains indications relating to the following items:

- I ☒ Basis of the opinion
- II ☐ Priority
- III ☐ Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- IV ☐ Lack of unity of invention
- V ☒ Reasoned statement under Rule 66.2(a)(ii) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- VI ☐ Certain documents cited
- VII ☐ Certain defects in the international application
- VIII ☐ Certain observations on the international application

Date of submission of the demand  09.03.2004	Date of completion of this report  11.10.2004
Name and mailing address of the international preliminary examining authority:   European Patent Office - Gitschiner Str. 103 D-10958 Berlin Tel. +49 30 25901 - 0 Fax: +49 30 25901 - 840	Authorized Officer  Verdrager, V Telephone No. +49 30 25901-648 

**INTERNATIONAL PRELIMINARY  
EXAMINATION REPORT**

International application No. PCT/CA 03/01195

**I. Basis of the report**

1. With regard to the **elements** of the international application (*Replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report since they do not contain amendments (Rules 70.16 and 70.17)*):

**Description, Pages**

1-3 as originally filed  
4-17 received on 10.09.2004 with letter of 09.08.2004

**Claims, Numbers**

1-2 received on 10.09.2004 with letter of 09.08.2004

**Drawings, Sheets**

1/7-7/7 as originally filed

2. With regard to the **language**, all the elements marked above were available or furnished to this Authority in the language in which the international application was filed, unless otherwise indicated under this item.

These elements were available or furnished to this Authority in the following language: , which is:

- ☐ the language of a translation furnished for the purposes of the international search (under Rule 23.1(b)).  
☐ the language of publication of the international application (under Rule 48.3(b)).  
☐ the language of a translation furnished for the purposes of international preliminary examination (under Rule 55.2 and/or 55.3).

3. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, the international preliminary examination was carried out on the basis of the sequence listing:

- ☐ contained in the international application in written form.  
☐ filed together with the international application in computer readable form.  
☐ furnished subsequently to this Authority in written form.  
☐ furnished subsequently to this Authority in computer readable form.  
☐ The statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.  
☐ The statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished.

4. The amendments have resulted in the cancellation of:

- ☐ the description, pages:  
☐ the claims, Nos.:  
☐ the drawings, sheets:

**INTERNATIONAL PRELIMINARY  
EXAMINATION REPORT**

International application No. PCT/CA 03/01195

5. ☐ This report has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed (Rule 70.2(c)).

*(Any replacement sheet containing such amendments must be referred to under item 1 and annexed to this report.)*

6. Additional observations, if necessary:

**V. Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement**

**1. Statement**

Novelty (N)	Yes: Claims	1-2
	No: Claims	
Inventive step (IS)	Yes: Claims	1-2
	No: Claims	
Industrial applicability (IA)	Yes: Claims	1-2
	No: Claims	

**2. Citations and explanations**

**see separate sheet**

**INTERNATIONAL PRELIMINARY  
EXAMINATION REPORT - SEPARATE SHEET**

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International application No. PCT/CA 03/01195

**Re Item V**

**Reasoned statement under Rule 66.2(a)(ii) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement**

**1. Cited documents**

- 1.1 The following documents are referred to in this communication; the numbering will be adhered to in the rest of the procedure:

D1: EP-A-0 373 340 (QUANTE AG) 20 June 1990 (1990-06-20)

**2. Novelty and inventive step**

- 2.1 The subject-matter of claims 1 and 2 is considered to be both novel and inventive (Article 33(2) and 33(3) PCT) for the following reasons.
- 2.2 The closest prior art is represented by document D1, which describes a connector for optical fibers. The connector of D1 comprises a longitudinally extending body (figure 6: (51)), said body having a conduit, and said body comprising a plurality of finger projections. The connector of D1 also comprises two collars (figure 6: (85)), each circumferentially coupled to an end of said connector.
- 2.3 The difference between the subject-matter set out in claim 1 and that of D1 is that the connector of claim 1 is a connector comprising:
- material having the shape memory property,
  - a connector housing comprising four quarter portions, and defining a connector chamber for receiving said connector, said quarter portions configured such that two of the quarter portions when assembled comprise a first end and two of the quarter portions when assembled comprise a second end of said connector housing and further configured to exert tractional force on the said connector when said connector is positioned in the connector chamber, by axial rotation of said first part end relative to said second end of said connector housing, each of said connector housing ends comprising an aperture and pass through conduit between said aperture and said connector chamber; and
  - a needle capable of insertion through said aperture, pass through conduit and connector conduit; and capable of expansion of the radial diameter of said

connector conduit when inserted there through.

- 2.4 The technical problem to be solved by the present invention is to provide a "last mile" optical fiber connector with high mechanical precision, enabling frequent connections and disconnections.
- 2.5 The tractional force applied by the four quarter portions on the connector deforms the connector according to the elastic limits of the connector made of a material having the property of shape memory. The inserted needle causes an extension of the diameter of the conduit. After removal of the needle but still under tractional force, optical fibers to be connected can be easily inserted in the enlarged conduit. The relieve of the tractional force on the connector then reduces the diameter of the connector conduit according to the shape memory property, therefore securing the optical fiber abutment.
- The specific features of the solution provided by claim 1 are neither disclosed in nor rendered obvious by either one of the prior art documents listed in the search report. Therefore, the subject-matter of present claim 1 is considered to be both novel and inventive (Articles 33(2) and 33(3) PCT).
- 2.6 The subject-matter of independent claim 2, which defines a method of connecting optical fibers, is also considered to be both novel and inventive (Articles 33(2) and 33(3) PCT).

### **3. Formal aspects**

- 3.1 Independent claims 1 and 2 are not in the two-part form in accordance with Rule 6.3(b) PCT.